

# Socialization of Stunting Prevention Through Consumption of Fish Products for Students of SMA Negeri 2 Muara Sugihan, Banyuasin Regency, South Sumatera Province

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## Abstract

The aim of this community service is to provide education about stunting and the use of fish products to prevent stunting to the students at SMA Negeri 2 Muara Sugihan, Banyuasin Regency. The method used in community service activities was socialization of stunting prevention through consumption of fish products for high school students, using public lectures and demonstrations with predetermined themes. The community service activity is expected to have a positive impact in an increasing of students' understanding for stunting and its prevention by consuming various processed fish products. The results of implementing community service were evaluated regarding students' understanding of the material presented in the form of achievement indicators and benchmarks. Based on the results of implementing community service, participants were able to understand the definition, causes and ways to prevent stunting. Then the participants were also able to understand the nutritional content of fish and its benefits in preventing stunting. In addition, the participants have learned about various types of processed fish products. Overall, consumption of fish products is beneficial to prevent in developing countries occurrence of stunting through application of nutritional education in community service activities.

## A. Introduction

The Indonesian government is committed to preventing and overcoming the problem of stunting, such as the issuance of Presidential Regulation Number 72 of 2021 concerning the Acceleration of Reducing Stunting which regulates, among other things: 1) a national strategy for accelerating the reduction of stunting; 2) implementing accelerated stunting reduction; 3) coordination of the acceleration of stunting reduction; 4) monitoring, evaluation and reporting and 5) funding. The Presidential Regulation explains that Stunting is a disruption in the growth and development of children due to chronic malnutrition and recurrent infections, which is characterized by their body length or height being below the standards set by the minister who handles government affairs in the health sector. The accelerated implementation of stunting reduction includes the following target groups: teenagers, prospective brides, pregnant women, breastfeeding mothers, and children aged 0 (zero) - 59 (fifty-nine) months (Presiden RI, 2020).

Following up on the Presidential Regulation, the Provincial Government, Regency/City Government, and the Village Government strengthens planning and budgeting, improves the quality of implementation, improves the quality of monitoring, evaluation and reporting, and increasing human resource capacity.

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Based on Acceleration Report Reducing Stunting, the South Sumatra Provincial Government in Semester 1 of 2023 shows that the trend in the prevalence of stunted toddlers in South Sumatra Province shows a decline from year to year, namely 18.6 percent in 2022 or a decrease of 6.2 percent compared to 2021. This downward trend is the largest decline in Indonesia. However, regarding the target in Presidential Regulation Number 72 of 2021, this achievement is still below the 2024 National target of 14 percent ([Tim Percepatan Penurunan Stunting, 2023](#)).

Stunting is defined as a condition that describes the malnutrition status that lasts consistently during the child's growth and development period from the beginning of life. With a Z-score of height by age of less than two standard deviations based on WHO growth standards ([Zulfikar et al., 2023](#)). Imbalances in nutritional intake and other health problems in the first 1000 days of birth cause stunting, which is a condition in toddlers in which children experience growth disorders, i.e. height shorter than the standard age ([Khoiriayah & Ismarwati, 2023](#)). The basic factors that cause stunting, such as the economy and education of mothers, are followed by intermediate factors, such as the number of family members, the height of the mother, the age of the mother, and the number of children of the mother. Next are proximal factors, such as the age of the child, exclusive breastfeeding, and BBLR (Lower Body Weight) ([Tebi et al., 2021](#)). Stunting is a major threat to the quality of human resources in Indonesia because it is not only a problem of physical growth, but also causes children to become sick, interfere with brain development, and interfere with intelligence ([Rahman et al., 2023](#)).

Stunting in childhood can have negative health impacts across life spans, including high morbidity and mortality, including life-threatening complications during childbirth, increased infant mortality, decreased cognitive performance and development, increased risk of infection, poor psychomotor development, poor school performance, poor intellectual intelligence, the emergence of long-term diseases, and decreased product capacity ([Setyorini & Andriyani, 2023](#)). According to data from the Ministry of Health, stunting can reduce academic achievement, increase the risk of obesity, and increase the risk of other degenerative diseases. Because stunting can affect a person's life, especially increasing the risk of impaired physical and cognitive development if not treated immediately ([Prastuti et al., 2023](#)). Therefore, stunting is a public health problem that can cause disability, death, and slow brain, motor, and mental development ([Akbarsyah et al., 2024](#)).

One of the unresolved nutritional problems in Indonesia is stunting, which has a major impact that ultimately leads to problems with physical, mental, intellectual, and cognitive development ([Nasution & Susilawati, 2022](#)). The problem of stunting is often considered a small problem. In fact, the impact of stunting is the accumulation of a body condition that is continuously malnourished and an early indication of health problems. Further impacts due to stunting can hamper motor and mental development and function because of reduced physical capacity, thus affecting the growth and development and learning abilities of children of productive age. The high rate of stunting is strongly influenced or closely related to environmental conditions, such as poverty, environmental health, the provision of nutritious food and parenting patterns. [Byrd et al. \(2022\)](#) did the observational studies and concluded that by adding fish for diet of maternal and child could improve the nutrition outcomes, for example the anemia and vitamin D status case. Furthermore, the nutrient richness of fish more environmentally friendly than other animal source foods. [Kadir \(2021\)](#) wrote that the advantages in nutrition found in fish to prevent stunting in early childhood include high Omega 3 fatty acids for the development of the eyes, brain, nervous tissue and also a complete amino acid composition of fish. [Suhaimi \(2022\)](#) studied the stunting toddlers in the lowlands of South Kalimantan Province, Indonesia, and concluded that amount of fish consumption has a significant effect on incidence of stunting, and frequency of fish consumption has a significant effect on incidence of stunting.

The Faculty of Fisheries and Marine, University of PGRI Palembang supports government policies in preventing stunting by providing information about stunting and the benefits of fish and processed fish products in preventing and overcoming stunting through community service activities, such as among students of SMA Negeri 2 Muara Sugihan, Banyuasin Regency, South Sumatera Province.

The objectives of this community service activity are as follows: (1) Increase the knowledge of students and teachers at SMA Negeri 2 Muara Sugihan, (2) Establish inter-institutional cooperation between SMA Negeri 2 Muara Sugihan and University of PGRI Palembang, through the signing of an Memorandum of Understanding (MoU) and Memorandum of Agreement (MoA), (3) Providing information to students of SMA Negeri 2 Muara Sugihan, Banyuasin Regency, regarding the existence of the Faculty of Fisheries and Marine, University of PGRI Palembang, (4) Open opportunities for prospective new students to study in

the Faculty of Fisheries and Marine, University of PGRI Palembang, from the coastal areas of Banyuasin Regency and surrounding areas.

The benefits of holding community service activity are namely: (1) Increase the knowledge of students and teachers at SMA Negeri 2 Muara Sugihan, regarding the proper and correct handling of fish product commodities, (2) Students and teachers could understand the important role of education in preventing stunting through consuming fishery products and they can disseminate information to the public, (3) By establishing MoA collaboration, it is hoped that it could increase the interest of prospective students at the Faculty of Fisheries and Marine, University of PGRI Palembang.

## B. Methods

The samples used in this community service are students and teachers at SMA Negeri 2 Muara Sugihan, Banyuasin Regency, South Sumatera Province. The method carried out in this service is to use presentation using power point media to the target audience about Stunting and How to Prevent it, Diversity of Local Fish Species, Diversification of Fish Products, The Importance of Fish Consumption for human, and Fish Products Business Analysis. Tools used during service activities are LCD, laptop, microphone, speaker, marker, A4 paper, pen, and camera. This community service was carried out on Thursday 30 November, 2023.

## C. Results and Discussion

This community service was carried out on Thursday 30 November, 2023 at SMA Negeri 2 Muara Sugihan, Banyuasin Regency, South Sumatera Province. This activity began with the signing of the MoU and MoA, continued with the delivery of 5 public lecture topics, then closed with the socialization of processed fish products that had been prepared by lecturers and tasted by students.



**Figure 1.** The signing of an MoU and MoA between SMA Negeri 2 Muara Sugihan and University of PGRI Palembang

The titles of the public lectures delivered by the lecturers to students are as follows: Stunting and How to Prevent it, Diversity of Local Fish Species, Diversification of Fish Products, The Importance of Fish Consumption for human, and Fish Products Business Analysis.





**Figure 2.** The situation when delivering public lectures by the lecturer

Evaluation of community service activities have been carried out to determine the achievement of activity objectives. The evaluation was carried out includes the implementation stages, the methods used and students' understanding of the material presented. The criteria, achievement indicators and benchmarks used in determining the success of community service activities are namely: (1) Students are able to explain the meaning and methods of preventing stunting, (2) Students have known the potential of local fisheries and the diversification of fish products as food to prevent stunting, (3) Students have known various commodities to processing fish products, (4) Students have carried out proper handling of fish commodities.



**Figure 3.** Evaluation of student knowledge after public lectures through questions and answers and giving prizes to students who answer questions correctly

The community service result is in line with the previous service activities, such as Nurapipah & Lestari (2023) who held community service activities at *Sekolah Dasar Negeri* (SDN) Cikaracak 1 located in Cikaracak Village, Argapura District, Majalengka Regency by providing education on the health benefits of consuming fish to prevent stunting from an early age; Muhaazzir et al. (2023) who held socialization of *Gemarikan* (likes to eat fish) to prevent stunting in children from an early age among 1<sup>st</sup> grade students of *Madrasah Ibtidaiyah Negeri* (MIN) 32, Mesjid Raya District, Aceh Besar Regency. The implication of this community service activities are namely: (1) Students are able to explain the meaning and methods of preventing stunting, (2) Students have known the potential of local fish and the diversification of fish products as foods to prevent stunting, (3) Students have recognized various commodities to processing fish products, (4) Students have able to carried out a proper handling of fish commodities. The limitation in implementing community service is that there is no evaluation for the application of understanding of the materials in the daily live of students and teachers because the activities were carried out in one day. In the future, a longer implementation time is needed so that the application of understanding of the material can be assessed in the daily lives of students and teachers. Further community service studies are needed to look at the results in all implemented programs to reducing stunting rates in developing countries with support of government.

#### D. Conclusion

Based on the results of this community service implementation, it can be concluded that the service increases knowledge of students of SMA Negeri 2 Muara Sugihan, Banyuasin Regency, South Sumatera Province for stunting and the benefits of processed fish products to prevent and overcome it. Participants in this activity were able to understand the definition, causes and ways to prevent stunting. In addition, the participants were able to understand the nutritional content of fish and its benefits in preventing stunting. Furthermore, the participants have recognized the various types of processed fish products.

## E. Acknowledgments

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